(No Model.)

M. H. McCORMICK.

BROOM HEAD.

No. 575,571. Patented Jan. 19, 1897.

Fig. 1.

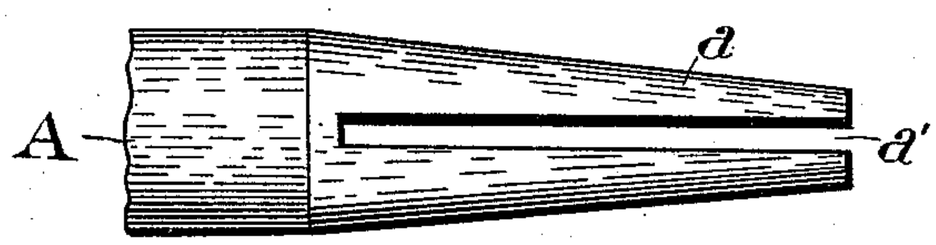


Fig. 2.

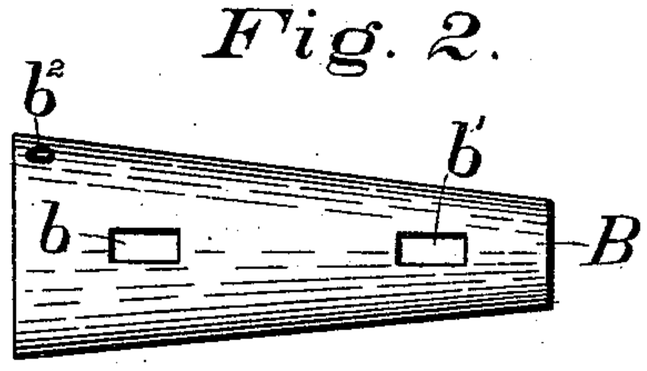


Fig. 3.

Fig. 5.

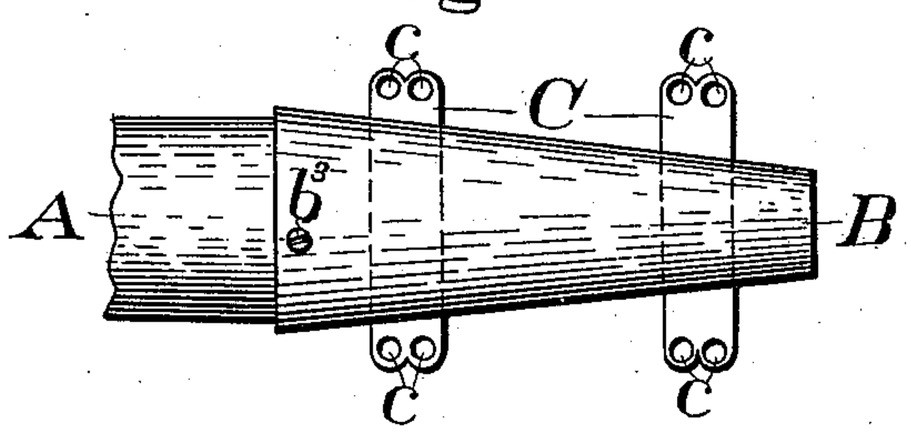


Fig. 4.

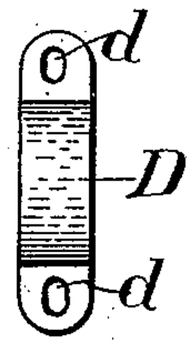


Fig. 6.

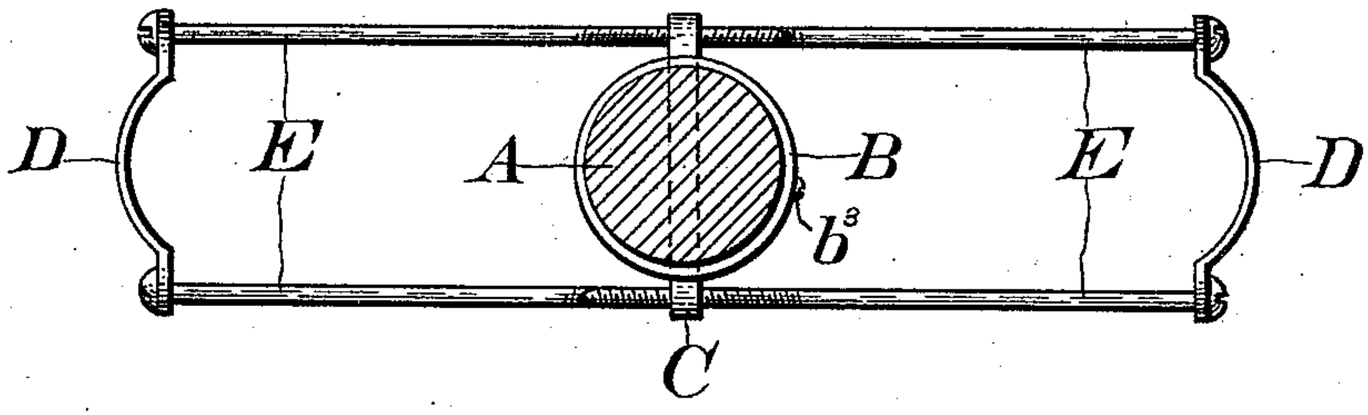


Fig. 7.

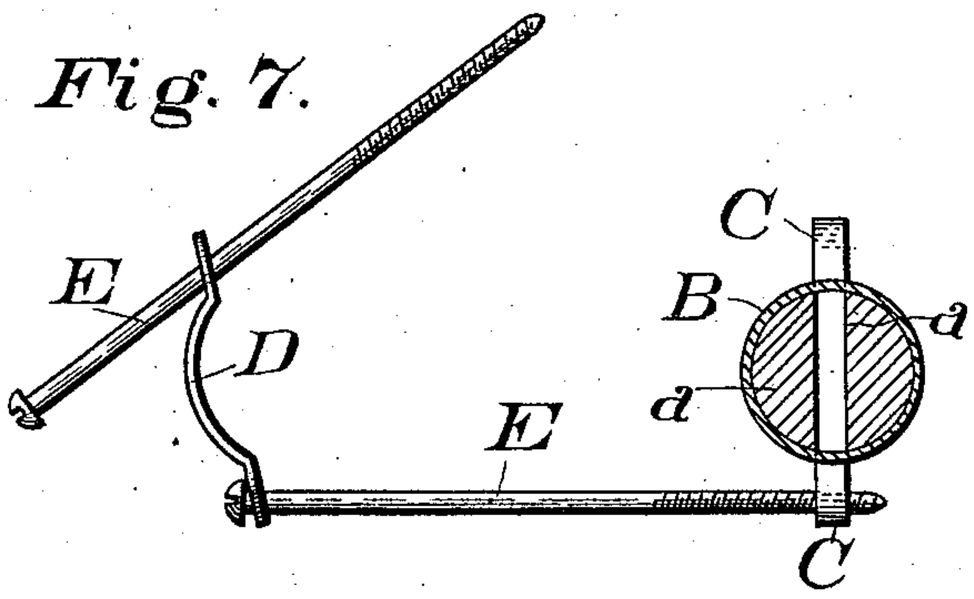
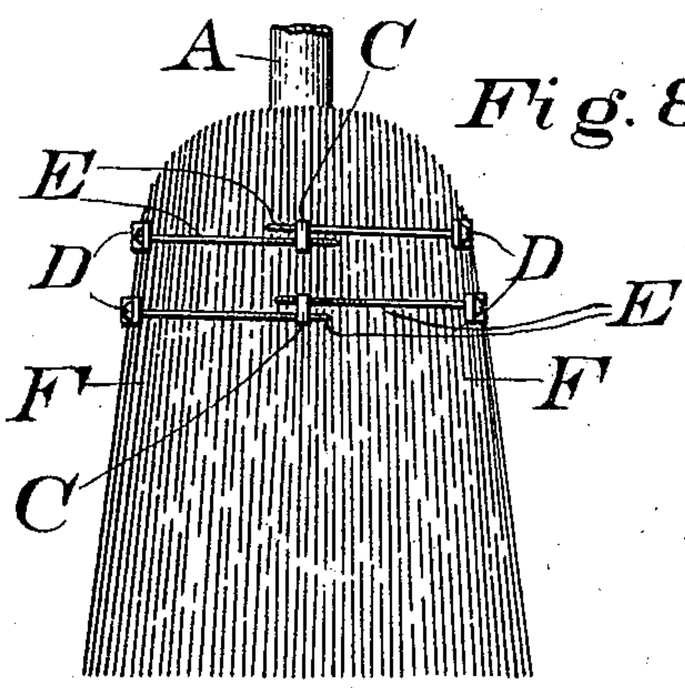


Fig. 8.



Witnesses
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UNITED STATES PATENT OFFICE.

MERTON H. McCORMICK, OF LAKE ODESSA, MICHIGAN, ASSIGNOR OF ONE-HALF TO EDWIN A. BUSH, OF SAME PLACE.

BROOM-HEAD.

SPECIFICATION forming part of Letters Patent No. 575,571, dated January 19, 1897.

Application filed May 11, 1896. Serial No. 591,109. (No model.)

To all whom it may concern:

Be it known that I, MERTON H. MCCORMICK, a citizen of the United States, residing at Lake Odessa, in the county of Ionia and State of Michigan, have invented certain new and useful Improvements in Broom-Heads; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to broom-heads, and its object is to afford improved means of attaching broom-straws to the stick in order that they may not become displaced under the stress of ordinary usage, yet permitting the straws to be readily and quickly removed and renewed when required.

Each constituent element of my invention is described in detail, and its office, together with the mode of operation of the whole, fully explained hereinafter.

Referring to the accompanying drawings, wherein like letters are used to designate like parts throughout the several views, Figure 1 represents a side view of a portion of the stick, showing its tapering end and the long recess cut therein. Fig. 2 represents a side view of the conical ferrule, showing one each of upper and lower pairs of slots situated oppositely and an orifice through which a screw or pin may be passed to fix the ferrule upon the stick. Fig. 3 represents a plan of one of a pair of bars having threaded orifices near the ends. Fig. 4 represents a plan of one of a number of similar yokes employed to connect the clamping-screws near their heads. Fig. 5 represents a side view of a portion of the stick combined with ferrule and bars. Fig. 6 represents a top plan of the upper pairs of screws, yokes, and upper bar in combination, the stick appearing in section. Fig. 7 represents a top plan showing a lower pair of screws upon one side of the stick, the threaded end of one screw being engaged with the bar, while the second screw is disengaged and turned outward in order that one division of broom-straws may be placed in position; and Fig. 8 represents a side view, reduced, of the completed broom.

In the different views, A designates the broom-stick, having a tapering extremity a, wherein is cut an elongated recess a'. (See Fig. 1.)

B designates a conical ferrule of any chosen material corresponding in shape with the taper of the stick. The ferrule is provided with two upper slots b, opposite each other, and has also two lower slots b', oppositely placed. There is usually one or more additional orifices b^2, suitably located, through which screws or pins may be driven to fix the ferrule upon the stick. (See Figs. 2 and 5.)

C designates bars or plates having pairs of threaded orifices usually placed side by side at each end. The bars are constructed to pass through slots $b\ b'$ in the ferrule, and the orifices are designed to engage the ends of the clamping-screws, to be described later. The orifices in the bars are marked $c\ c$.

D designates a yoke, customarily constructed in the curved form, having straight ends, as shown in Fig. 6. Through the yokes near their ends are elongated orifices d, designed to encompass the shanks of the clamping-screws and to allow them lateral movement.

E marks each of the clamping-screws, Figs. 6, 7, and 8, possessed of long cylindrical shanks threaded near one end and provided with a recessed head of common form at the other extremity.

F F mark two divisions of broom-straws which compose the broom and are clamped by upper and lower pairs of screws upon opposite sides of the stick.

It will be observed that there are four pairs of clamping-screws, usually the same in form and size, four yokes exactly alike, (marked D,) and two similar bars C. The parts are assembled in the following manner: The bars C are inserted through slots $b\ b'$ in the ferrule and the stick driven in so that the bars enter the long recess a'. By utilizing this method and form of the tapering end of the stick the bars are tightly grasped and wedged in place, the ferrule being then fastened by a pin or screw b^3. (See Fig. 5.) It is obvious that the tapering end of the stick might be

driven into the ferrule without being recessed and that orifices might be later formed through the stick to correspond with the slots *b b'* for the reception of the bars C; but the first-stated mode is the more efficient. Let any two screws now be taken and passed through elongated orifices *d* in a yoke D, the bend of the yoke being placed outwardly. Under these conditions if a threaded end of one clamping-screw be caused to engage the correspondingly-threaded orifice of a bar C, as shown in Fig. 7, it will be found that the second screw may be moved outwardly and away from the first. Each pair of screws when combined with yokes and bars, as indicated, is susceptible of being so moved, and it will be readily understood that if a division of broom-straws F be placed between the members of the pairs of screws upon one side of the ferrule and those screws set up within the bars the straws may be subjected to a great clamping effect, from which it would be practically impossible to loosen them except by removing the pressure of the screws. Ordinarily I arrange the clamping-screws E as shown in Fig. 6, causing one screw E of a couple attached to the same yoke D to engage upon one side of the stick the upper of the pair of threaded orifices *c* in a bar C, while the second clamping-screw of the couple is inserted in the lower of orifices *c* of same bar upon the other side of the stick. When both divisions of broom-straws are clamped upon opposite sides of ferrule and stick, the straws may be evenly arranged at the sides and the upper ends rounded, as shown in Fig. 8, although this formation can obviously be varied within the scope of my invention.

I am aware that it is not new to attach broom-straws to sticks by the pressure of screws, and I do not claim that feature broadly.

What I do claim, and desire to protect by Letters Patent of the United States, is—

1. In a broom-head, the combination of a stick having a tapering extremity, a tapering ferrule B, having suitable orifices, and bars C having pairs of threaded orifices near each end, said stick having its substance cut away to permit the passage of said bars, yokes having elongated orifices near each end, and clamping-screws E adapted to be passed through the elongated orifices of said yokes and to engage the threaded orifices in said bars, substantially as described.

2. In a broom-head, the combination of a stick having a tapering end provided with a longitudinal recess, *a'*, a tapering ferrule having suitable orifices, bars C having pairs of threaded orifices near each end, yokes having elongated orifices near each end, clamping-screws E adapted to be passed through the elongated orifices of said yokes and to engage the threaded orifices in said bars, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

MERTON H. McCORMICK.

Witnesses:
W. H. HOWARD,
ALICE J. McCORMICK.